

roads, it seems hardly too much to hope that the details of the New Jersey field with its extremely useful topographical map could be very rapidly determined. Without the previous Pennsylvania work, the same result would require much labor and time; and even with the Pennsylvania results at hand, the lack of a good topographical map would occasion great delay and difficulty in working out the details. Such, for example, would be the case in the portion of the Pennsylvania Mesozoic field southwestward from the one already mapped. This matter, among many others, gives New Jersey good reason to rejoice in its topographical map as a means of saving great outlays; while Pennsylvania cannot but find frequent cause to regret its own penny-wise and pound-foolish economy in neglecting so long to make a thorough topographical survey of its whole territory. That neglect is all the more surprising in a State that might well be called the home of American topography as an aid to geology.

NOTE.—Through a misunderstanding of instructions the lithographer has in the cross-section extended the trap rubbish all along the trap bed, instead of confining it to the surface of the ground.

On the genus Tomiopsis.

By E. D. Cope.

(*Read before the American Philosophical Society, November 3, 1893.*)

TOMIOPSIS gen. nov. Tooth consisting of a much flattened cylinder of hard dentine, which is enclosed in cementum. The latter forms a layer of medium thickness on the external side, and a very thick layer on the internal side, which does not extend below the middle of the length. Crown compressed, tapering gradually to the root, the external face separated from the convex interior face by an angle. Pulp-cavity large, extending to near the cutting face, but occupied near the middle (? normally) by a mass of dentine, which substance also forms the centre of the cutting face, which is thus concave on wear.

The general characters of this tooth are those of mammal of the order Bruta (Edentata). It resembles no known form of the order, but might be said to be intermediate between those of an armadillo and a sloth. It, however, differs from both and from members of the order generally in the gradual anteroposterior contraction of the crown to the root (which is broken off). This circumstance, together with the hollowness of the crown, shows that it is not adapted for continuous service during the life of the animal, but is probably a member of a dentition consisting of more than one series. In this respect it resembles the incisor tooth of some

fishes, but it differs from all of these in the long crown without distinction of root, and in the thick cement investment.

Char. specif. Crown elongate, curved transversely to the long diameter of the grinding face. The latter is a little narrower than a semicircle, and the internal half of it consists of cementum. The dentinal plates form two cutting edges which are separated by a shallow valley of soft dentine. The two edges of dense dentine are in contact at one end of the grinding face, but leave an interval at the other, and both extremities of the external and shorter ridge are folded inwards, forming two loops. External face flat and smooth. Other surfaces also smooth. Length of tooth minus root, on external curve, 14 mm.; long diameter of grinding surface, 7 mm.; short do., 4 mm.; long diameter at broken base, 4 mm. I propose for the name of this species, *Tomioptis ferruminatus*.

This animal left its remains in a bed of probably Neocene age, which is exposed on the Lapara creek in Western Texas. It was associated with scales of *Lepidosteus*, and bones of *Trionyx* and a tooth of a crocodile, which do not furnish an exact clue to the age of the formation. The specimens were obtained by Dr. E. T. Dumble, Director of the Geological Survey of Texas, and submitted to me for determination.

The Conservation of Osmazome in Roasting.

By Mr. R. Meade Bache.

(Read before the American Philosophical Society, November 17, 1893.)

Time was, and not so very long ago, when I should have hesitated about touching in this hall upon any subject related to cookery, despite the fact that we are by the Constitution of our Society devoted to the promotion of useful knowledge. But now, when the art of cooking seems to be beginning to receive some general recognition in this country, and is rising in some small measure to the dignity of a science, through expert articles in magazines and through departments of special schools, I need no longer fear that even here gastronomical discussion allied to dietetic good might fall upon unwilling ears.

In the days when I was a mighty hunter before the Lord, before I ceased to take satisfaction in killing for pleasure, when I shot deer on the mountain side, once at a safe distance at a retreating grizzly bear, and on another even followed a she one and two cubs towards their lair, without finding it, to which gracious dispensation I doubtless owe the honor of addressing this meeting of the Society, I made a casual observation in the pure air of the mountains whenever I came to cook an evening meal of venison. This was, of the exceedingly large development of osmazome on the roast. Reflection I did not at that time make on the subject. The